

Message

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**Sent:** 9/23/2011 8:50:39 PM  
**To:** White, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4e179825823c44ebbb07a9704e1e5d16-White, Paul]; Bob Sonawane [Sonawane.BobLNDU@usepa.onmicrosoft.com]; Ila Cote [Cote.IlaLNDU@usepa.onmicrosoft.com]; Cogliano, Vincent [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=51f2736376ac4d32bad2fe7cfef2886b-Cogliano, Vincent]; Kate Guyton [Guyton.KateLNDU@usepa.onmicrosoft.com]  
**Subject:** Fw: The War on Cancer Continues  
**Attachments:** cancer progress 2011\_AACR sept11.pdf

FYI

More very relevant information on cancer, epigenetics and cancer that is very relevant to what we are doing.

Jane Caldwell

-----Forwarded by Jane Caldwell/DC/USEPA/US on 09/23/2011 04:48PM -----

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From: "Huff, James (NIH/NIEHS) [E]" <huff1@niehs.nih.gov>  
Date: 09/23/2011 04:20PM  
Subject: The War on Cancer Continues  
(See attached file: cancer progress 2011\_AACR sept11.pdf)

"If you think research is expensive, try disease"  
Mary Lasker Cancer Research Advocate (1901-1994)

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Drawings are spectacular.  
Interesting AACR highlights DDT as an occupational carcinogen [page 33]  
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AACR Cancer Progress Report 2011 [attached]

This year marks the 40th anniversary of the signing of the National Cancer Act of 1971, which dramatically focused the country's attention on the vital need to conquer cancer at the earliest possible time.

The AACR believes this to be a fitting time not only to commemorate the advances in cancer research that have been made to date, but also to paint a picture of where the science is leading us.

Inspired by the excitement of our past discoveries, and poised to transform the latest discoveries into the best in patient care, researchers and their partners in the cancer research community possess the steadfast resolve to forge ahead to realize the day when cancer is removed as a major threat to our nation's citizens and to future generations. Realizing this bright future of cancer prevention and cures will require that Congress and the American public stand firm in their commitment to the conquest of cancer.

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The War on Cancer Continues  
<http://consumer.healthday.com/Article.asp?AID=657028>  
Report finds progress has been made fighting some, but not all, malignancies

TUESDAY, Sept. 20 (HealthDay News) -- Forty years after President Nixon signed the National Cancer Act into law and pledged to put the country's resources to work to find better treatments for cancer, substantial victories have been scored against some, but not all, cancers.

That's the core finding of a new report, the AACR Cancer Progress Report 2011, released Tuesday by the American Association for Cancer Research (AACR).

The National Cancer Act promised more funding for cancer research and prevention. Since then, death rates for many cancers have dropped significantly. From 1990 to 2007, death rates for all cancers combined dropped 22 percent for men and 14 percent for women, resulting in nearly 900,000 fewer deaths during that time, according to the report.

Today, more than 68 percent of adults live five years or more after being diagnosed, up from 50 percent in 1975. The five-year survival rate for all childhood cancers combined is 80 percent, compared to 52 percent in 1975.

There are about 12 million cancer survivors living in the United States; 15 percent of them were diagnosed 20 or more years ago.

Some of the biggest successes: Breast cancer deaths fell about 28 percent from 1990 to 2006, while deaths from cervical cancer have dropped nearly 31 percent. Colorectal deaths have fallen 28 percent in women and 33 percent in men; deaths from leukemia have fallen nearly 15 percent in women and 10 percent in men; and deaths from stomach cancer have fallen 34 percent in women and 43 percent in men.

Many more men are also surviving prostate cancer, with death rates falling 39 percent. And those figures reflect outcomes for people who were diagnosed several years or more ago, said report co-chair Elizabeth Blackburn, a professor of biology and physiology in the department of biochemistry and biophysics at the University of California, San Francisco.

Over the past few years, treatments have only gotten better, including a better understanding of how to harness the immune system to fight the cancer; more targeted drugs that interfere with the cancer while leaving healthy cells alone; and treatments that are based on specific genetic characteristics of the cancer.

Just this year, for example, there have been major advances in treating melanoma, Blackburn noted. In March, the U.S. Food and Drug Administration approved ipilimumab, a new drug to treat advanced melanoma. In August, a second melanoma drug, vemurafenib, was also approved. Both have been shown to improve survival rates among those with melanoma skin cancer dramatically.

And yet, there is a long way to go, experts said. Cancer remains a major cause of death, and certain cancers -- pancreatic, ovarian and lung, for example -- remain very deadly and are often caught after they've already spread, making them more difficult to treat, Blackburn said.

"What we can see is great triumphs in some areas, and work to be done in some of the most feared ones, like pancreatic cancer," Blackburn said. "That has been a tough one, probably because it lies undetected in your body for a number of years."

Over the past couple of decades, many of the advances in treating cancer stem from molecular biology, which is unlocking the genetics of tumors that has led to an "explosion of knowledge" about how cancer grows, said report co-chair Dr. Judy Garber, president of the AACR and director of the Center for Cancer Genetics and Prevention at the Dana-Farber Cancer Institute in Boston.

Forty years ago, "we had some drugs for cancer, but we didn't understand very much about why they worked or how they worked, or what made cancer behave the way that it does," she said. "Then people began to find ways to study molecular biology of the body, what makes cancer tick, and we learned that cancer is fundamentally a set of genetic diseases. Not that it's inherited, but the problems that make cancer cells become cancer cells instead of normal cells is that their genes change."

Genes direct cells to divide or when not to, and when to die. Cancer occurs when errors in the genes cause them to continue to divide rather than to die, or to leave the place where they're growing and to grow new colonies elsewhere -- metastasis.

Understanding which genes are driving the errors inside the cell has led to the development of more targeted treatments, Garber said.

And yet, cancer remains a wily foe. Over time, cancer cells continue to mutate and learn how to evade treatments, rendering therapy ineffective.

"Cancers are always changing their spots. They're always mutating," Garber said. "That's why even when we have targeted therapies, they don't cure everyone. The assumption is we

will need to be even smarter, to learn to give them differently, such as in combination with other treatments, or give them at the very earliest time when cancer is the most curable."

It's for all those reasons that it's crucial to continue funding cancer research, despite budget wars and deficit worries, Garber said.

"We celebrate every success, but many of our successes are small successes," Garber said.

"Pancreatic cancer is still a very lethal and serious diagnosis. Most people do not survive five years. Ovarian cancer is one that almost always is found quite late, because the symptoms are very subtle and people don't realize it's there until there's a lot. People also rarely survive brain tumors. Cancer has a bad name for a reason."

Still, she added, "it would be hard not to be optimistic. It's such an exciting time. There is so much that has changed, but there is so much more to do. We wouldn't want to stop now."

More information

The U.S. National Cancer Institute has more on all types of cancer and treatment.

SOURCES: Judy Garber, M.D., M.P.H., director, Center for Cancer Genetics and Prevention, Dana-Farber Cancer Institute, Boston; Elizabeth Blackburn, Ph.D., professor, biology and physiology, University of California, San Francisco; Sept. 20, 2011, AACR Cancer Progress Report 2011

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